DOCUMENT RESUME

ED 177 514 CS 005 068

AUTHOR Kachuck, Beatrice Levy
TITLE Syntax in Reading Series and Reading Tests.
PUB DATE May 78
NOTE 20p.; Paper presented at the Annual Meeting of the International Reading Association (23rd, Houston, TX May 1-5, 1978)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Complexity Level; Elementary Education; Intermediate Grades; Primary Grades; *Reading Comprehension; Reading Instruction; *Reading Materials; Reading Research; Reading Tests; *Sentence Structure; Structural Analysis; *Syntax; *Textbook Content; Textbook Evaluation
IDENTIFIERS *Basal Reading

ABSTRACT

Six reading textbook series and two standardized reading tests were examined for their uses of 16 syntax structures and the sequential patterns of increasing complexity of syntax structures within each series. Results were as follows: although the series showed overall increases in complexity across the six grades, the increases were not sequential and did not reflect evidence that learning syntactic complexities is developmental; the complexities contributing to comprehension problems appeared frequently within each grade but with significant variability among series; and a substantial increase in frequencies of syntax complexities occurred in the fourth grade levels of the reading tests. The magnitude of uneven sequencing of complexities and the variability among the textbook series reflect an inadequate state of knowledge of how specific structures affect comprehension at each grade level. (Author/RL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED177514

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Beatrice Levy Kachuck

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Syntax in Reading Series and Reading Tests[1]

Beatrice Levy Kachuck[2]
School of Education, Brooklyn College
City University of New York

Paper presented at the International Reading Association Convention, May 3, 1978.

[1]The research was supported by National Institute of Education Grant No. NIE-G-0015 and City University of New York Faculty Research Award Program, RF No. 11232.

[2]The assistance of Marianne Jackson with various parts of the research is gratefully acknowledged.

CS005069

Abstract

Investigated syntax structures in basal readers and in reading tests. Sequential patterns of increasing complexity and occurrence of 16 specific structures were compared across elementary school grades in six reading series and in comprehension subtests of two standardized tests. Main findings were 1) although there was an overall increase in complexity across the six grades, the series do not reflect evidence that learning syntactic complexities is developmental, 2) complexities that have been shown to be related to comprehension problems appear frequently within each grade, with significant variability among series, 3) a substantial increase in frequencies of syntax complexities occurs in the fourth grade level tests. It is suggested that the magnitude of uneven sequencing of complexities and the variability among series partly reflect an inadequate state of knowledge of how specific structures affect comprehension at each grade level. Further study of the possibility that complex syntax may be a variable in reading test scores in intermediate grades is recommended.

The study investigated syntax structures in basal readers and in standardized reading tests. The intent was to provide descriptions of syntax presented to children across the grades, as a source for increasing understanding of reading comprehension problems. The research design, a search for developmental syntax comprehension requirements was motivated by theoretical concepts that language processing is central to reading (Singer and Ruddell, 1976; Carroll, 1977), empirical evidence that syntax learning is developmental (C. Chomsky, 1969; Kessel, 1970; Brown, 1973; Entwisle and Frasure, 1974), and evidence of a positive correlation between understanding syntax structures and reading comprehension (Ruddell, 1965; Bormuth et al., 1971; Richek, 1976-77). Analysis of tests was of special interest, to explore one aspect of language that may be related to the decline in progress of the reading ability of many disadvantaged children in intermediate grades (Office of Educational Evaluation, 1977).

Questions have been raised recently regarding the relative importance of syntactic and semantic structures in understanding language (Chafe, 1970; Fredericksen, 1975), arguing that semantic concepts are central. Going even further, Bransford and Franks (1971), Meyer (1974), and Fredericksen (1975) demonstrated that information is constructed from semantic cues beyond single sentences in a discourse. However, no studies have disproved the evidence that syntax does affect comprehension (Fillenbaum, 1974). It may be, as Fillenbaum suggested, that research findings vary with research questions. Meanwhile, in addition to the studies showing relationships between syntax and children's language understanding, Coleman's (1965) and Jarvella's (1970) work with adults demonstrated the psychological reality of syntax. In the former study, simplifying structures facilitated comprehension and in the latter, memory was affected by clause enclosures.

It seems reasonable to assume that within the framework of the generally accepted premise that reading comprehension is the result of successful processing of grapho-phonic, semantic, and syntactic information (Goodman, 1976), a research focus on any one or a combination of

the three components can be useful. Ultimately, of course, investigators (and readers) must integrate not only the formal properties of language but also factors of style, affect, and pragmatics.

The study reported here was expected to answer two main questions: 1) Is there a sequential pattern of increasing complexity presented to children as they progress from first grade to sixth? 2) Is there a correspondence, in number and kind, between the structures in readers and in standardized tests at the same grade levels?

Procedures

Structures Selected

Sixteen structures associated with comprehension problems in the research cited earlier were selected for identification. For each, a reader must infer the deep structure to understand the surface form (N. Chomsky, 1965, 1975; Liles, 1972). Selections do not include all the complexities children encounter, partly because no complete grammar of English has yet been written and also because of feasibility limitations of the study.

The 16 selected structures, with operational definitions and illustrative sentences, are shown in Table 1.

Insert Table 1 about here

Books and Tests Selected

All the basic readers for grades 1 - 6 in six reading series were in the sampling pool: Harper & Row Design for Reading (Bradley et al., 1972); Holt Basic Reading System (Weiss and Hunt, 1973); Houghton Mifflin Readers (Durr et al., 1974); Lippincott Basic Reading (McCracken and Walcutt, 1975); Open Court Basic Readers (Carus, 1972); and Reading Unlimited (Aaron et al., 1976).

The reading comprehension subtests of two widely used standardized tests were analyzed: Comprehensive Test of Basic Skills (CTBS), Form S (CTB/McGraw-Hill, 1973) and the Stanford Achievement Test (SAT), Form A (Madden et al., 1973).

Sampling Method

Rules specified dividing each grade's basic readers into tenths, analyzing the first 10 complete prose sentences at those points, and omitting pages with pictures or captions only, poetry and word lists. The procedure yielded 100 sentences from each grade level in each series.

Since reading passages in the tests are short, all prose sentences in the comprehension subtests were analyzed, to provide a data base of reasonable size. Frequencies of occurrence of structures are reported as proportions of 100 sentences. In lower grades' tests, where words had been deleted in passages, as a variant of a cloze measure, syntax structures were determined by reference to test writers' selection of correct words. Only five test levels are reported because the publishers' consultants advised that just one level is usually used in both fifth and sixth grades.

Results

As shown in Figure 1, all the books and tests present more complex structures in sixth grade than in first. Although it is not surprising that more complex language appears across the elementary years, an interesting aspect of the study is that specific features of complexity, the selected structures, account for at least part of the increase. Apparently, writers or editors give some attention to syntax as well as the more commonly expected readability factors, sentence length and vocabulary.

Insert Figure 1 about here

Inclusion of all the materials results in a densely packed figure but facilitates comparisons of data within and across each set of texts and tests. It can be seen that within the overall increase across the six years, there is little evidence of developmental planning. In the books there are steep slopes between the first two grades, some leveling off of increments in the middle years, and usually sharp increases

again between the last two grades. The most noticeable exception is Lippincott's large increase between fourth and fifth grade, followed by an almost equally large decrease in sixth. Holt's decline between second and third grade is also different from the other series, as is Reading Unlimited's spurt between third and fourth, followed later by a decrease between fifth and sixth. The widely separated plot points at each grade indicate considerable variability in the expectations of how much complex language children can process each year.

As might be expected, detailed analysis showed that the variations in frequencies of the group of structures reflect extensive differences in specifics. The grades in which structures are introduced and the rates at which they increase are quite erratic (Kachuck, Note 1). For example, children who learn reading with Open Court's books are expected to understand selections that contain relative restrictive clauses at a rate of 11 per 100 sentences (combining clauses in which the relative pronouns are stated and deleted) and increasing fairly steadily after that. In contrast, that initial proportion is not approached until second grade in Harper & Row, third grade in Houghton Mifflin, fourth grade in Reading Unlimited, and fifth in Lippincott. In third grade no nominalizations have yet appeared in Holt but Open Court presents four and Lippincott has 17. The only consistency among the series is a yearly occurrence of a large number of pronouns beyond their immediately preceding nominals. Beginning in first grade, the range of occurrences was 61 - 118, variable but frequent, and increasing each year. The initial high rate might reflect an expectation that children would use picture referents since texts on each page are usually brief in first grade. However, that could not be the case in fourth grade where the range of occurrences among the series is 82 - 152, with a median of 98.

The tests present more contrasts than correspondences with the books. As seen in Figure 1, in the first two grades CTBS has a smaller proportion of the selected structures than all the books and SAT's plot points are below four series, indicating less complex language in the tests. A dramatic rise occurs from third to fourth grade in both

tests. This brings the CTBS peak above four series and SAT stands out above all the books. Neither the leveling off of CTBS nor the decline in SAT results in much of a change in this relationship in the last two years. At fifth and sixth grades the lines are horizontal because the same test levels are usually used in both years, as noted earlier.

In Table 2 the percentage and statistical significance of frequency differences between successive grades permit closer analysis of sequential patterns. Statistical differences were tested for binomial distributions, with probability set at .05 (Edwards, 1968). Percentage differences are probably the stronger indicators of how much more or less difficult books may appear to children.

Insert Table 2 about here

The results of the calculations highlight the variability of syntax comprehension expected of pupils in the various sets of materials. Between first and second grade there are significant increases in all series except one and in both tests, confirming the impression given in Figure 1. For the books, the percentage of increments ranges from a low of 14 to a high of 48. There is apparently no relationship between the complexity of first grade books and the magnitude of increasing complexity the following year. Harper & Row, with the smallest percentage of increase, has approximately the same number of complex structures as Lippincott (compare Figure 1), which has the largest percentage of increase at that point. On the other hand, Open Court's relatively moderate increase is based on much more complex language than any other series in its first year.

All but two series present significant increases again between third and fourth grade. At this point, the range of differences is even greater than in the first row, again indicating disagreement about children's tolerance for complex language or, perhaps, neglect of attention to this aspect of the reading process. Half of the series present moderate increases, two increase slightly, and one

spurts upward. Between the next two grades the level of complexity remains fairly stable except for Lippincott's major increment. However, that program reverses its acceleration the following year and, as was seen in Figure 1, declines to a point close to the level of complexity of most of the other series. Open Court has only small increases and even one decrease between second and fifth grade but resumes the same upward rate between the last two years as in the beginning. The general pattern of small increments in the intermediate grades is somewhat surprising because there is a general impression in the schools that reading instruction materials prepare children for curriculum content texts in which language structures are quite complex.

Table 3 pinpoints comparisons between levels of syntax complexity in the books and tests in each grade. The table displays only the number of books in each grade in which there are statistically significant differences in the number of structures in books and tests (determined by chi square with Yates correction for a small number of cells in each comparison). For example, in first grade five books have significantly more of the selected structures than CTBS does and for the sixth there is no significant difference. Of those five, there is less than one percent probability that this occurred by chance alone in four of the books; there is less than five percent probability that this is so for one book.

Insert Table 3 about here

It is clear that not only is there a major increase in the complexity of the test passages at fourth grade but there is also a shift in the correspondence with the levels of complexity in the books. CTBS approaches the complexity of half the series in third grade and then becomes comparable to most of them. The change is more marked in SAT. Whereas in third grade only two books had significantly fewer of the complex structures than this test, in fourth grade all of them do.

To find the structures that account for the sharp rise in complexity between third and fourth grade, those that increase by 10 percent or more were identified. In CTBS there are increases of 10 - 20% for NVDCC and PBIN; 21 - 30% for PV; 31 - 40% for NOM, RACPS, and RCPP. (See Table 1.) In SAT there are increases of 10 - 20% for NOM, RRCPD, and NVDMC; 21 - 30% for RACPD, NDCP, and NVDCC; 31 - 40% for PV; and 41 - 50% for RCPP. In all these structures except RACPS and PBIN deletions in the surface structures obscure clues to the deep structure where meaning is generated. They are forms that have been found to interfere with comprehension in the research cited in the first section of this paper. Richek's (1976-77) study indicated that even pronouns that follow their antecedents directly present problems for third graders.

Additional interesting differences emerged in comparing third and fourth grade tests. In SAT, although the passages are generally shorter than in CTBS, average sentence lengths increase from 11.83 to 20.90 words. In CTBS the increase is from 10.15 to 14.45 average number of words per sentence. The sentence lengths appear to reflect comparative sentence complexity.

Discussion

When the data in this study were examined closely it became evident that the readers reflect overall but not sequential patterns of increasing syntactic complexity. There were many spurts within the six year span. The number of complexities was large.

It would be easy to conclude that the books' language should merely be simplified. However, such a conclusion would be unproductive. Simple, active declarative sentences of the noun-verb-object variety are not only stylistically undesirable but could not express complex relationships of ideas. Furthermore, simplification of basal readers would not prepare children for reading interesting books outside of school. Nevertheless, since there is compelling evidence that many children are failing to understand what they read and that there is a relationship between processing syntax and comprehension, the issue merits attention. It could be approached through research and intervention.

There is at the present time only meager research to indicate which structures children can be expected to understand at various ages. It may be that the variability among the series in the kinds and numbers of structures presented in each grade reflects this. Studies are needed. Investigations would probably be most useful if they controlled for other variables that are poorly understood. There is no certainty about the relationship between processing syntax structures and the concept representations in semantic units. For example, in a sentence such as The patriots, expecting an attack during the next week, prepared for it by organizing, training themselves to use guns, and stockpiling food supplies, there could be multiple problems. One might manipulate texts to ask whether the difficulty of the noun-subject deletions in the main clause is the result of the embedded relative clause with consequent delayed resolution of the main verbs and memory failure (Dawkins, 1975), the abstract quality of patriots and the verbs, or the number of verbs. It is also possible that the other parts of the discourse might resolve the problems posed by the complexities in the sentence. It would be interesting to know just how much more information would have to be given in a selection to clarify the relaships expressed in the structure of the sentence and the conceptual relationship between an expected attack by an enemy and the process of preparation for it. Varying text information in research could resolve such issues.

We also do not know how children learn syntax. There is evidence that neither imitation nor frequent presentations of patterns is sufficient, although models do and probably must occur in children's environments before they are produced. Verbal interactions, that is conversations, in which certain structures are used for communication, have been found to facilitate syntaxtic development (Cazden, 1972). Perhaps studies of the effect of discussions of reading selections would be helpful. Meanwhile, it probably would be useful if publishers would identify the complexities children will encounter in their books. They could then include in their teachers' manuals some suggestions for

discussion points to clarify the complexities.

It could be argued that basal readers are not the only source from which children learn language. Children may, and indeed they should, read other books. They also have language arts lessons other than reading and they have oral language experiences outside of school. Such arguments have merit. However, the readers are the tools designed for basic reading instruction. It seems reasonable to expect that they would include specific attention to syntax, a factor that is basic to the reading process. The basals are likely to be the only books that low achievers read and are, therefore, critical vehicles for skill development. Moreover, for such children linguistic patterns presented in other language arts lessons may need to be retaught in direct association with reading since they appear to lack versatility and flexibility in shifting set under new conditions (Kress, 1965). As for the syntax commonly used in speech, in the classroom and at home, that is not as complex as the structures in books. The example of the sentence about the patriots, above, can be expected in a book but would be unusual in conversation.

The coincidence between the large increase in the number of complex structures in the tests between third and fourth grade and the frequent decline in upward movement of reading test scores at that point is too great to ignore. Serious consideration must be given to the possibility that understanding complex syntax is a significant test variable. Of course the issue of practice must be considered. If the structures in the tests have already been read in books, should it matter how often they occur in assessment? That is not clear. The problem may be one of density. That is, if the same or a larger number of complexities occur in a short passage and in a longer one, then the reader is, in effect, working with more complex language in the former. Furthermore, fewer explanatory clues are available in the shorter discourse and comprehension questions are targeted at a smaller base of information.

A final suggestion is offered to teachers. They could probably strengthen their reading instruction if they scanned materials for syntax complexities ~~are~~ were prepared to discuss the content of selections where they anticipate comprehension difficulties.

Reference Notes

Kachuck, B. L. Syntax patterns in elementary school readers. Washington, D.C.: DWEH/National Institute of Education, Project No. 4-0418, Nov., 1975.

References

Aaron, I. E., Artley, A. S., Goodman, K. S., et al. Reading unlimited. Glenview, ILL.: Scott, Foresman, 1976.

Bormuth, J. R., Carr, J., Manning, J., & Pearson, P. D. Children's comprehension between-and-within-sentence syntactic structures. Journal of Educational Psychology, 1970, 61, 349-357.

Bradley, E. J., Jones, D. M. Cooper, J. C., et al. (Eds.). The Harper & Row design for reading. New York: Harper & Row, 1974.

Bransford, J. D., & Franks, J. J. The abstraction of linguistic ideas. Cognitive Psychology, 1971, 2, 331-350.

Brown, R. A first language: The early stages. Cambridge, Mass.: Harvard University Press, 1973.

Carroll, J. B. Developmental parameters of reading comprehension. In J. T. Guthrie (Ed.), Cognition, curriculum, and comprehension. Newark, Del.: International Reading Association, 1977.

Carus, M. (Ed.). Open Court basic readers. LaSalle, Ill.: Open Court, 1972.

Cazden, C. B. Child language and education. New York: Holt, Rinehart and Winston, 1972.

Chafe, W. L. Meaning and the structure of language. Chicago: University of Chicago Press, 1970.

Chomsky, C. The acquisition of syntax in children from 5 to 10. Cambridge, Mass.: MIT Press, 1969.

Chomsky, N. Aspects of the theory of syntax. Cambridge, Mass.: MIT Press, 1965.

Chomsky, N. Reflections on language. New York: Pantheon, 1975.

Coleman, E. B. Learning of prose written in four grammatical transformations. Journal of Applied Psychology, 1965, 49, 332-341.

CTB/McGraw-Hill. Comprehensive test of basic skills, Form S. Monterey, Cal.: CTB/McGraw-Hill, 1973.

Dawkins, J. Syntax and readability. Newark, Del.: International Reading Association, 1975.

Durr., W. K., Windley, V. O., & Earnhardt, K. S. (Eds.). Houghton Mifflin readers. Boston: Houghton Mifflin, 1974.

Edwards, A. L. Experimental design in psychological research (3rd ed.). New York: Holt, Rinehart and Winston, 1968.

Entwisle, D. R. & Frasure, N. E. A contradiction resolved: Children's processing of syntactic cues. Developmental Psychology, 1974, 10, 852-857.

Fillenbaum, S. Syntactic factors in memory. In T.A. Sebeok (Ed.), Current trends in linguistics (Vol. 12). The Hague: Mouton, 1974.

Fredericksen, C. H. Representing logical and semantic structure of knowledge acquired from discourse. Cognitive Psychology, 1975, 7, 371-458.

Goodman, K. S. Behind the eye: What happens in reading. In H. Singer & R. B. Ruddell (Eds.), Theoretical models and processes of reading. Newark, Del.: International Reading Association, 1976.

Jarvella, R. J. Effects of syntax on running memory span for connected discourse. Psychonomic Science, 1970, 19, 235-236.

Meyer, B. J. F. Identification of the structure of prose and its implications for the study of reading and memory. Journal of Reading Behavior, 1975, 7, 7-47.

Kessel, F. S. The role of syntax in children's comprehension from ages six to twelve. Monograph of the Society for Research in Child Development, 1970, 35 (6).

Kress, R. A. An investigation of the relationship between concept formation and achievement in reading. Unpublished doctoral dissertaition, Temple University, 1955.

Liles, B. L. Lingusitics and the English language. Pacific Palisades, Cal.: Goodyear, 1972.

Madden, R., Gardner, E. F., Rudman, H. C., et al. Stanford achievement test, Form A. New York: Harcourt, Brace, Jovanovich, 1973.

McCracken, G., & Walcutt, C. C. Basic reading. New York: Lippincott, 1975.

Office of Educational Evaluation. Pupil reading achievement in New York City. New York: Board of Education of the City of New York, 1977.

Richek, M. A. Reading comprehension of anaphoric forms in varying lingusitic contexts. Reading Research Quarterly, 1976-77, 12, 145-165.

Ruddell, R. B. The effect of the similarity of oral and written patterns of language structure on reading comprehension. Elementary English, 1965, 42, 403-410.

Singer, H., & Ruddell, R. B. (Eds.). Theoretical models and processes of reading. Newark, Del.: International Reading Association, 1976. (Section three: models).

Smith, W. The effect of transformed syntactic structures on reading. In C. Braun (Ed.), Language, reading, and the communication process. Newark, Del.: International Reading Association, 1971.

Weiss, B. J., & Hunt, L. C. The Holt basic reading system. Holt, Rinehart and Winston, 1973.

Table 1

Selected Syntax Structures, Definitions, and Illustrative Sentences

---

1. Relative Restrictive Clause with Pronoun Stated (RRCPS). Clause modifies a noun and defines or restricts its use. The modified noun in replaced by a pronoun in the clause. The woman who helps me with reading is coming for dinner.

2. Relative Restrictive Clause with Pronoun Deleted (RRCPD). Clause modifies a noun as in RRCPS but the noun is not replaced. With the the money I get from this milk, I will buy some chickens.

3. Relative Appositive Clause with Pronoun Stated (RACPS). Clause modifies a noun by attribution or additional but incidental information. The modified noun is replaced by a pronoun in the clause. In Egypt, which is located in the northeastern part of Africa, you can see the pyramids.

4. Relative Appositive Clause with Pronoun Deleted (RACPD). Clause modifies a noun as in RACPS. The relative pronoun is not replaced. I saw John, dressed in his new clothes, across the street.

5. Relative Clause in Infinitive Verb form (RCIV). The clause modifies a noun, has no stated noun as its subject, and its verb has no tense marker. I need a boy to milk cows.

6. Relative Clause in Prepositional Phrase form (RCPP). Clause modifies a noun as restrictive or appositives do, with no noun replacement and no verb in it. The woman on the left is the governor.

7. Noun (subject) Deleted and Compound Predicate (NDCP). One stated noun heads two or more verbs connected by a coordinating conjunction or by a comma and a coordinating conjunction in a series. Jack tied a rope around the calf's neck and led it to the castle.

8. Verb Deleted with Compound Subject (VDCS). Two or more nouns head a verb and are connected by a coordinating conjunction or by a comma and a coordinating conjunction in a series. Still the cow, the horse, and the people were chasing him.

9. Noun and Verb Deleted in Compound Complement (NVDCC). Noun and verb are stated only once but head more than one complement. The children

Table 1 - continued

sit down on the benches and on the ground or on special stools.

10. Noun Deleted with Infinitive Verb (NDIV). No noun is stated as subject of a verb and there is no tense marker. He taught them to be kind.

11. Element Deleted - Miscellaneous (EDM). A noun in an ellipsis or a raised, embedded sentence or a preposition for an indirect object is deleted. Then he stopped, staring with his mouth open.

12. Noun and Verb Deleted in Miscellaneous Clauses (NVDMC). Both noun and verb are deleted in any clause not described above. Mary had never seen such treasures as lay before her.

13. Passive Voice verb (PV). Subject of the verb is deleted or stated in a prepositional phrase after the verb. The bus was hit by a car.

14. Pronoun Beyond Immediately Preceding Noun Antecedent (PBIN). Pronoun's antecedent is not stated in the same sentence or is not the noun just preceding it in the sentence. When he gave the signal she knew they would leave.

15. If clause (IF). If introduces a clause. I asked Jim if he wanted to go with me.

16. Nominalization (NOM). Derived nominals and gerunds that function as adjectives or nouns. Derivations must be from verbs by addition of an affix but do not include agents or instruments (e.g., _er in teacher). The teacher's corrections were not clear to Jane.

Table 2

Percent of Increases in Selected Structures in Succeeding Grades

Grades	Books						Tests	
	Harper & Row	Holt	Houghton Mifflin	Lippin-cott	Open Court	Reading Unlimited	CTBS	SAT
1-2	14	43*	48**	44**	25**	27**	38**	30**
2-3	21*	10	29**	10	2	9	28**	23**
3-4	24**	26*	8	20**	10	56**	44**	51**
4-5	5	3	0	39**	-7	9	2	-1
5-6	21**	30**	15*	-53**	28**	-8		

Note: Only five test levels are customarily used.

*$p < .05$

**$p < .01$

Table 3

Number of Books with Frequencies of Selected Structures Significantly Different from Tests

	Grade					
Test	1	2	3	4	5	6
CTBS						
More	5[a]	6[b]	3	0	1	2[c]
Fewer	0	0	0	1	1	0
SAT						
More	2	2	3	0	1	0
Fewer	0	0	2	6	5	5[c]

Note: p .01 for all cells not marked

[a] $p < .05$ for one book

[b] $p < .05$ for two books

[c] $p < .05$ for three books

Figure Caption

Figure 1. Totals of 16 selected structures per 100 sentences in six reading series and two reading tests.